

What is claimed is:

1. An ultraviolet/infrared absorbent low transmittance glass consisting of base glass comprising:

65 to 80 wt.% SiO_2 ;

5 0 to 5 wt.% Al_2O_3 ;

greater than 2.1 to less than or equal to 10 wt.% MgO ;

5 to 15 wt.% CaO wherein a total amount of MgO and CaO is 7 to 15 wt. %;

10 to 18 wt.% Na_2O ;

10 0 to 5 wt.% K_2O wherein a total amount of Na_2O and K_2O is 10 to 20 wt.%; and

0 to 5 wt.% B_2O_3 ,

and colorants comprising:

1.25 to 2.2 wt.% total iron oxide ($\text{T-Fe}_2\text{O}_3$) expressed as Fe_2O_3 ;

15 0.001 to 0.018 wt.% CoO ;

0 to 0.0004 wt.% Se ; and

0.028 to 0.2 wt.% NiO , wherein said glass has a turquoise blue or deep green color.

20 2. An ultraviolet/infrared absorbent low transmittance glass as claimed in claim 1, wherein $\text{T-Fe}_2\text{O}_3$ is equal to or greater than 1.25 wt.% and less than 1.8 wt.%.

3. An ultraviolet/infrared absorbent low transmittance glass as
25 claimed in claim 1, wherein $\text{T-Fe}_2\text{O}_3$ is between 1.8 wt.% and 2.2 wt.%.

4. An ultraviolet/infrared absorbent low transmittance glass as claimed in claim 1, wherein Se is less than 0.0002 wt.%.

30 5. An ultraviolet/infrared absorbent low transmittance glass as claimed in claim 1, wherein Se is less than 0.0001 wt.%.

6. An ultraviolet/infrared absorbent low transmittance glass as claimed in claim 1, wherein NiO is equal to or greater than 0.028 wt.% and less than 0.05 wt.%.
- 5 7. An ultraviolet/infrared absorbent low transmittance glass as claimed in claim 1, wherein NiO is between 0.05 wt.% to 0.2 wt.%.
8. An ultraviolet/infrared absorbent low transmittance glass as claimed in claim 1, wherein said colorant further comprises CeO₂ in
10 an amount of no greater than 2.0 wt.% and/or TiO₂ in an amount of no greater than 2.0 wt.%.
9. An ultraviolet/infrared absorbent low transmittance glass as claimed in claim 1, wherein the amount of FeO calculated as T-Fe₂O₃
15 is in the range from 15 to 40% of T-Fe₂O₃.
10. An ultraviolet/infrared absorbent low transmittance glass as claimed in claim 1, wherein the glass with a thickness of 4mm has a total solar energy transmittance (TG) smaller than a visible light
20 transmittance (YA) by the C.I.E. illuminant A, and YA is in a range from 23% to 50% and TG is in a range from 7% to 35%.
11. An ultraviolet/infrared absorbent low transmittance glass as claimed in claim 10, wherein YA is between 25% and 40% and TG is between
25 20% to 35%.
12. An ultraviolet/infrared absorbent low transmittance glass as claimed in claim 10, wherein the glass has a color defined by the following CIELAB coordinates $-9 < a^* < -6$ and $-3 < b^* < 3$.
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13. An ultraviolet/infrared absorbent low transmittance glass as claimed in claim 1, wherein said glass has an ultraviolet transmittance

of no greater than 6%.

14. An ultraviolet/infrared absorbent low transmittance glass as claimed in claim 1, wherein the glass has a dominant wavelength in a range of 480 to 525 nanometers when a measurement is made based on a glass thickness of 4 mm using illuminant C.

15. An ultraviolet/infrared absorbent low transmittance glass as claimed in claim 1, wherein the glass has an excitation purity less than 11% when a measurement is made based on a glass thickness of 4 mm using illuminant C.

16. An ultraviolet/infrared absorbent low transmittance glass as claimed in claim 1, wherein NiO is included in the glass such that the glass has the turquoise blue or deep green color by reinforcement of air blast cooling.

17. An ultraviolet/infrared absorbent low transmittance glass consisting of base glass comprising:

65 to 80 wt.% SiO₂;
0 to 5 wt.% Al₂O₃;
greater than 2.1 to less than or equal to 10 wt.% MgO;
5 to 15 wt.% CaO wherein a total amount of MgO and CaO is 7 to 15 wt.%;

10 to 18 wt.% Na₂O;
0 to 5 wt.% K₂O wherein a total amount of Na₂O and K₂O is 10 to 20 wt.%; and

0 to 5 wt.% B₂O₃,

and colorants without Se comprising:

1.25 to 2.2 wt.% total iron oxide (T-Fe₂O₃) expressed as Fe₂O₃;
0.001 to 0.018 wt.% CoO; and
0.028 to 0.2 wt.% NiO,

wherein said glass has a turquoise blue or deep green color.

18. An ultraviolet/infrared absorbent low transmittance glass as claimed in claim 17, wherein NiO is included in the glass such that
5 the glass has the turquoise blue or deep green color by the reinforcement of air blast cooling.

19. An ultraviolet/infrared absorbent low transmittance glass as claimed in claim 1, wherein MgO is more than 3.0 wt%.

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20. An ultraviolet/infrared absorbent low transmittance glass as claimed in claim 17, wherein MgO is more than 3.0 wt%.